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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,915	02/05/2004	Tim Nieman	297912003410	5246
25224	7590	03/08/2006	EXAMINER	
MORRISON & FOERSTER, LLP 555 WEST FIFTH STREET SUITE 3500 LOS ANGELES, CA 90013-1024			WOLLSCHLAGER, JEFFREY MICHAEL	
			ART UNIT	PAPER NUMBER
			1732	

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/772,915

Applicant(s)

NIEMAN ET AL.

Examiner

Jeff Wollschlager

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/5/04; 5/20/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. All claims are drawn to methods. The title should reflect this.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 10 refers to the "said radially expanded tube" of claim 9. Claim 9 expressly states that the ePTFE tube is "non-radially expanded." Claim 10 therefore lacks antecedent basis. For the purpose of examination, claim 10 is read as "said **non**-radially expanded tube".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5 and 9-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Colone et al. (U.S. Patent 6,187,054; filed February 4, 1999; issued February 13, 2001).

Claim 1 is directed to a method of producing an expanded polytetrafluoroethylene (ePTFE) structure comprising the steps of providing an ePTFE tube, radially expanding the tube to a second inner diameter, calendering the radially expanded tube while maintaining the second inner diameter, and heating the calendered tube above the crystalline melt-point for polytetrafluoroethylene while maintaining the second inner diameter to form the structure.

Colone et al. teach a method of producing an expanded polytetrafluoroethylene (ePTFE) structure comprising the steps of providing an ePTFE tube (col. 4, lines 1-10), radially expanding the tube on a hot mandrel (col. 4, lines 13-21), calendering the radially expanded tube while maintaining its expanded second inner diameter (col. 5, lines 3-6), and heating the calendered tube at about 360 °C while still disposed on the mandrel ensuring the second inner diameter is maintained (col. 5, line 65 – col. 6, line 2). The crystalline melting-point of polytetrafluoroethylene is about 327 °C.

Claim 9 is directed to a method of producing an expanded polytetrafluoroethylene (ePTFE) structure comprising the steps of providing an ePTFE tube that has not been radially expanded, calendering the tube while maintaining its first inner diameter, and heating the calendered tube above the above the crystalline melt-point for polytetrafluoroethylene while maintaining the first inner diameter to form the structure.

The difference between claim 9 and claim 1 is that the tube in claim 9 is not radially expanded prior to further processing.

Colone et al. teach that tubes with a variety of diameters can be made (col. 1, lines 26-29) and that depending on the final product, initial tubes of other diameters, and thicknesses may be made by the same process (col. 4, lines 8-10). Colone et al. further teach an iterative process until the desired diameter of the tube is achieved. Therefore, if the starting diameter of the tube was the desired final diameter it is inherent in the teaching of Colone et al. that radially expanding the tube further would not be necessary and that calendering would still be performed to provide strength (col. 2, lines 38-40) and heating the calendered tube above its crystalline melting point would still be performed to provide the final geometric shape (col. 5, line 65 – col. 6, line 2). Further, if the step of radially expanding the tube is omitted in the method taught by Colone et al. the limitations of claim 9 are met. It is proper to eliminate a step from the reference because claim 9 uses the open language “comprising”.

Regarding claim 2, Colone et al. exemplify an initial ePTFE tube with a nominal diameter of 6 mm (col. 4, lines 6-7) that is radially expanded to 25 mm (col. 5, lines 33-36) and further teach that the tubes can be expanded radially up to a factor of ten (col. 5, lines 36-38).

As to claims 3 and 10, the method taught by Colone et al. requires a mandrel whose surface is not perfectly smooth, but instead has been scored or scratched (col. 4, lines 33-38). This surface treatment would inherently result in different densities in adjacent sections of the tube.

As to claims 4 and 11, Colone et al. teach that different inner diameters can be produced along the length, for example by forming the structure in the shape of a cone (col. 8, lines 13-16).

Regarding claims 5 and 12, the use of fillers in plastic applications is well known in the art for reducing manufacturing costs, reducing raw material costs, increasing production capacity, and providing additionally desired product properties. For example, Colone et al. exemplify the use of a lubricant in the production of the initial tube (col. 1, lines 38-40).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 6-8 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colone et al. (U.S. Patent 6,187,054; filed February 4, 1999; issued February 13, 2001) in view of Moret de Rocheprise (U.S. Patent Number 5207960; issued May 4, 1993).

Regarding claims 6 and 13 the method of calendering taught by Colone et al. includes positioning the radially expanded ePTFE tube on the cylindrical mandrel, placing it on a hard smooth surface while providing a downward force and rolling the radially expanded tube in a reciprocal fashion perpendicularly to the central axis of the loaded mandrel. Colone et al. further teach that this could be performed by hand or with a machine. (col. 5, lines 3-21). Colone et al. do not teach that the downward force is applied by a first metallic plate being held stationary under a constant load and that a second metallic plate is reciprocated along a direction perpendicular to the axis of the loaded mandrel. However, Moret de Rocheprise teaches a method of rolling a PTFE tube where he positions the tube over a cylindrical mandrel and places the loaded mandrel between three wheels positioned at equally spaced surfaces (Figure 1). These wheels are rotated and apply mechanical force on the tube along a direction essentially perpendicular to the central axis of the loaded mandrel.

Therefore it would have been *prima facie* obvious to one of ordinary skill at the time of the claimed invention to take the teaching of Moret de Rocheprise of providing multiple devices, in his case wheels, at opposing positions against the tube to apply a

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force to the tube along a direction essentially perpendicular to the central axis of the loaded mandrel and modify the method of Colone et al. by introducing an additional plate, at an opposing position, and using that plate to provide the reciprocating motion instead of providing the reciprocating motion by hand because Moret de Roceprise teach that the installation as depicted is but one example of other possible methods of performing the rolling step (col. 2, lines 40-45). Wheels (2) and (3) (see Figure 1) taught by Moret de Roceprise suggest the surface (52) (see Figure 4) taught by Colone et al. while Wheel (1) suggests an additional device to provide the downward force that is performed manually by Colone et al. Further, one of ordinary skill would be motivated to modify the method of Colone et al. after reviewing the teaching of Moret de Roceprise in view of Colone et al's teaching of automating their method. It would be obvious to automate the method with a reciprocating flat plate.

Therefore the claimed invention as a whole is obvious over the combined teaching of the prior art.

Regarding claims 7, 8, 14, and 15 Colone et al. in view of Moret de Roceprise teach the method of claims 6 and 13 as discussed above. Colone et al. further teach placing a sheet of material, in the form of shims, between the loaded mandrel and the hard smooth surface (Figure 7D). It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to modify the method taught by Colone et al. in view of Moret de Roceprise to include placing a sheet of material on both sides of the metallic plate because Colone et al. discusses that various methods could be utilized to achieve the calendering results (col. 5, lines 18-22).

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Further, it is well known in the art, for example, to provide buffer layers between calendering surfaces and the surface of the material being calendered. These buffer layers are provided to prevent adhesion to the calendering surface and to soften the contact between the calendering surface and the surface of the material being calendered. Therefore the claimed invention as a whole is rendered *prima facie* obvious in light of the prior art.

Conclusion

All claims are rejected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Wollschlager whose telephone number is 571-272-8937. The examiner can normally be reached on Monday - Friday 7:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JW

Jeff Wollschlager
Examiner
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February 28, 2006

A handwritten signature in black ink, appearing to read "Michael P. Colaianni".

MICHAEL P. COLAIANNI
SUPERVISORY PATENT EXAMINER